# AVIAN INFLUENZA (BIRD FLU)

May 2006

***Responses to Questions from the General Public***

**Q. What is Avian Influenza (AI)?**

**A.** Avian influenza (AI), commonly called bird flu, is a disease found among poultry. AI viruses can infect chickens, turkeys, pheasants, quail, ducks, geese and guinea fowl, as well as a wide variety of other birds, including migratory waterfowl.

AI viruses can be classified into low and high pathogenicity forms based on the severity of the illness they cause in poultry. Most strains are classified as low pathogenicity AI (LPAI) and cause mild clinical signs. In contrast, high pathogenicity AI (HPAI) causes a severe and extremely contagious disease.

Influenza is characterized further by two groups of surface proteins known as hemagglutinin (H) and neuraminidase (N). There are 16 different types of hemagglutinin proteins (H1-H16) and nine different types of neuraminidase proteins (N1-N9), resulting in 144 possible subtypes. The virus recently detected in several Asian and European countries is an H5N1 highly pathogenic virus.

**Q. Can a LPAI strain become highly pathogenic?**

**A.** While LPAI is considered lower risk, some, especially the H5 and H7 types, have the capacity to mutate into more virulent strains.

**Q. What are the signs of AI in birds?**

**A.** LPAI typically produces mild signs including decreased food intake, coughing, sneezing, and decreased egg production. Birds affected with HPAI usually have a severe illness, including sudden death, diarrhea, coughing, sneezing, nasal discharge, lack of coordination, lack of energy and appetite, decreased egg production, soft-shelled or misshapen eggs, swelling and purple discoloration of the skin.

**Q. How is the disease spread?**

**A.** Influenza primarily spreads by contact between healthy and infected birds and through contact with contaminated equipment and materials. The virus is shed in the feces and in secretions from the nose, mouth and eyes. Contact with infected fecal material is the most common method of bird-to-bird transmission. The AI virus can spread in the air between birds in a poultry house and between poultry premises with the movement of contaminated equipment, or by people carrying the virus on their shoes, clothes or hands. It can also spread to other flocks on unwashed eggs. Airborne transmission of virus from farm-to-farm is highly unlikely.

**Q. Does HPAI exist in the U.S.? Has it ever occurred in this country?**

**A.** Incidents of LPAI are occasionally detected in domestic poultry, but there is no evidence that HPAI currently exists in the U.S. HPAI has never been detected in California; however, there have been three HPAI outbreaks in poultry in this country - in 1924, 1983 and 2004. No significant human illness resulted from these outbreaks.

**Q. How can we prevent HPAI entering U.S. poultry?**

**A.** The USDA restricts importation of poultry and poultry products from countries affected by H5N1 HPAI. The USDA also works with international organizations like the World Organization for Animal Health (OIE), the United Nations' Food and Agriculture Organization (FAO), and World Health Organization (WHO) to assist HPAI-affected countries with disease prevention, management, and eradication. By helping these countries manage and eradicate AI outbreaks, we reduce the risk of disease spreading to the U.S.

**Q. Is AI a reportable disease?**

**A.** Yes, California law requires that veterinarians, laboratories, bird owners and any person who knows or suspects birds are infected with AI report it to CDFA or USDA.

**Q. What should you do if your birds have signs of AI?**

**A.** If birds have signs of HPAI, or may have been exposed to birds with the disease, you should immediately notify your local veterinarian, or state veterinarians at the California Department of Food and Agriculture, or the USDA Veterinary Service.

**Q. How is AI diagnosed in birds?**

**A.** Swab samples taken from the throat and/or the cloaca, blood samples or dead birds are sent to a USDA-approved laboratory. In California the Animal Health and Food Safety Laboratory system is used, with facilities in Davis, Fresno, San Bernardino, Tulare and Turlock. A polymerase chain reaction (PCR) test is run, typically producing results within three hours. A confirmatory test is done when positive samples are from an area where AI has not been previously detected. This takes 3-5 days and involves growing the sample in embryonated chicken eggs and identifying the strain as HPAI or LPAI.

**Q. What are we doing to monitor birds for AI?**

**A.** USDA, CDFA, Cooperative Extension, veterinarians, poultry businesses and bird enthusiasts collaborate to ensure that diverse populations of birds are tested for AI to detect any incursion as soon as possible. In 2005, more than 100,000 birds were tested for AI in California.

USDA and CDFA veterinarians are specially trained to diagnose foreign animal diseases like AI and regularly investigate suspicious diseases. This effective surveillance relies on close communication between veterinarians and farm personnel. Animal health officials also screen birds for HPAI where live birds are sold, such as at live bird markets, feed stores, pet stores and swap meets.

The California Department of Fish and Game (CDFG), federal wildlife agencies and universities are collaborating to survey wild birds in a national wildlife surveillance plan.

**Q. Does AI threaten human health?**

**A.** LPAI poses no known serious threat to human health. However, some strains of HPAI viruses can infect people having close, direct contact with infected birds. The potential for the virus to mutate into a form that spreads from person-to-person is a serious public health concern. Since December 2003, a growing number of Asian, European and African countries have reported outbreaks of HPAI; the rapid spread of HPAI is historically unprecedented and of growing concern for human and animal health.

**Q. Does proper food handling prevent AI?**

**A.** If HPAI were to enter the U.S., ongoing surveillance and mandatory inspections would prevent diseased poultry from entering the food chain. Proper handling and cooking of poultry and eggs protects people against this virus. Safe food handling and preparation is important at all times:

- Wash hands before and after handling food.
- Prevent cross-contamination - keep raw meats and their juices away from other foods.
- Wash countertops, knives, cutting boards and other utensils with hot soapy water after use.
- Sanitize cutting boards with a solution of one teaspoon of chlorine bleach in a quart of water.
- Use a food thermometer to ensure food has reached the proper temperature.
- FDA discourages eating eggs that have not been adequately cooked.

Poultry and egg products imported to the U.S. must meet all safety standards applied to foods produced in the U.S.

**Q. What can producers do to prevent AI?**

**A.** Poultry producers should strengthen biosecurity practices to prevent introducing AI into their flocks, including:

- Process each lot of birds separately, and clean and disinfect poultry houses between flocks.
- Permit only essential workers and vehicles on the farm.
- Provide dedicated clean clothing, footwear and disinfection facilities for employees.
- Thoroughly clean and disinfect equipment and vehicles entering and leaving the farm.
- Not share equipment or vehicles with other farms.
- Avoid visiting other bird facilities.
- Not bring birds from slaughter channels to the farm.
- Educate employees how to avoid transmitting disease.

**Q. What can bird owners do to prevent AI?**

**A.** Owners of pet and backyard birds can reduce their risk of AI by minimizing their birds' exposure to wild birds or water that may have been contaminated by wild birds as follows:

- Only feed what your birds will eat within a short time so as not to attract wild birds.
- Raise domestic poultry indoors or within an enclosure that will separate them from wild birds.
- Do not locate your birds near standing bodies of water that attract waterfowl and water birds.
- Isolate and observe new flock additions and returning show birds off-site for 3 weeks for signs of disease.

**Q. Is my cat at risk?**

**A.** Cat infections occasionally occur during H5N1 outbreaks in domestic or wild birds through contact with infected birds or their feces. Cats may die from H5N1, and shed the virus in respiratory and intestinal secretions. Cats can spread the virus to other cats, but it is unlikely that they play a role in the natural transmission cycle of H5N1 virus.

| Important Contact Information | |
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| CDFA Sacramento (HQ) | 916-654-1447 |
| CDFA Modesto District | 209-491-9350 |
| CDFA Ontario District | 909-947-4462 |
| CDFA Redding District | 530-225-2140 |
| CDFA Tulare District | 559-685-3500 |
| USDA/APHIS/VS | 877-741-3690 |
| Avian Health Group | 1-800-491-1899 |
| CDFG Wildlife Program | 916-445-3565 |

**For more information, visit Web sites at: http://www.cdfa.ca.gov/ahfss/ah and http://www.aphis.usda.gov/**